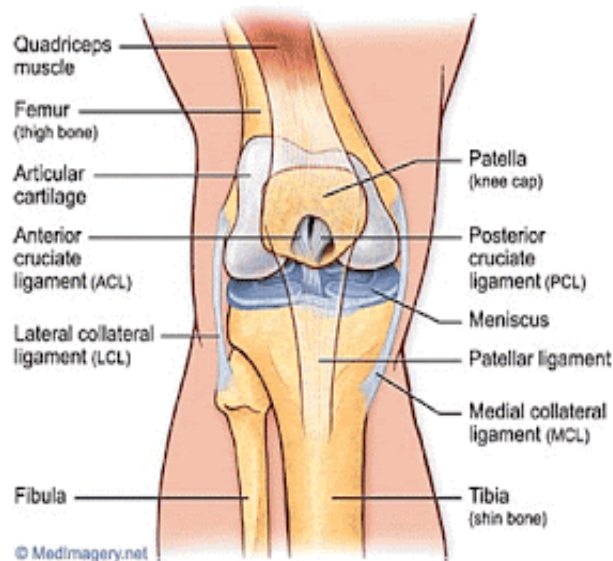


TOTAL KNEE REPLACEMENT

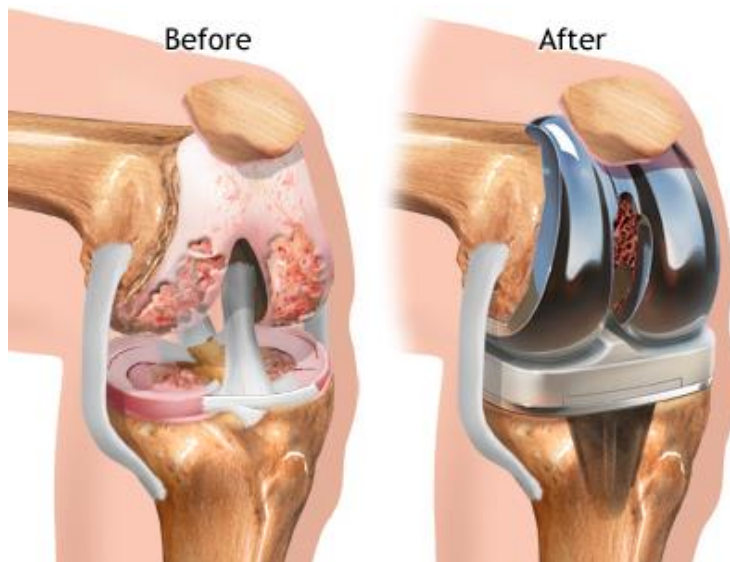
General Knee Anatomy

- The knee is composed of three bones: the thigh bone (femur), kneecap (patella), and shin bone (tibia).
- The Bones are covered by a very smooth layer composed of cartilage – this is the cartilage that is damaged leading to **osteoarthritis**
- Because the knee is under constant pressure from our body weight, there are two “shock absorbers”- the menisci (lateral and medial meniscus), that sit between the femur and tibia.
- Ligaments provide knee stability. There are four main ligaments: the medial and lateral collateral ligaments, and the anterior and posterior cruciate ligaments.
- Tendons that arise from muscles, attach to the bones to help the knee move as a hinge joint.



What is a total knee replacement?

- Due to the diseased and loss of normal cartilage, the exposed bones, which have nerve endings, are under constant stress.
- This leads to loss of motion and pain
- In a total knee replacement, the diseased cartilage is removed and replaced with metal on the femur and tibia.
- In addition, a plastic piece is placed between the femur and tibia as well as on the undersurface of the patella to allow smooth movement.



CALENDAR LAYOUT

| 5 Days Before Surgery | 2 Days Before Surgery | 1 Day Before Surgery | Day of Surgery | Post-op Day 1 | Post-op Day 2 | Post-op Day 3+ |
|---|---|--|---|---|---|---|
| <ul style="list-style-type: none"> • Stop blood thinning medications (i.e. Advil, Aleve, Aspirin, Fish Oil, Vitamins, Supplements, etc. • Ensure you have attended your pre-operative clearance appointment with your primary care provider. • Do not shave surgical area. | <ul style="list-style-type: none"> • Place ice packs in freezer. • Ensure medications have been picked up from pharmacy. See attached sheet for medication instructions. • Purchase waterproof bandage for shower. | <ul style="list-style-type: none"> • Wash your knee and entire leg with the recommended wash • The hospital will reach out to you today to relay your surgical time. Surgical times are subject to change, please keep your schedule open. • Ensure you have your transportation home arranged. Patients will not be discharge to a Lyft, Uber or Taxi. | <ul style="list-style-type: none"> • Follow same instructions as 1 day before. • Stop all food and drink at midnight the day of surgery. • Evening: Start medications. See attached sheet for medication instructions. • Begin icing. • Start aspirin 81 mg twice daily for 30 days. | <ul style="list-style-type: none"> • Continue to ice the knee. • Take medications as instructed. • No showering. • Continue aspirin 81 mg twice daily for 30 days. • Use crutches. • Start post-operative exercises. | <ul style="list-style-type: none"> • Continue to ice the knee. • Take medications as instructed. • CONTINUE GENTLE RANGE OF MOTION EXERCISES. | <ul style="list-style-type: none"> • Continue to ice the knee. • Showering may begin but dressing must stay covered. • Take medications as needed. • CONTINUE GENTLE RANGE OF MOTION EXERCISES. Reference postop exercise sheet for instructions. • See us for your scheduled post-operative appointment. We will remove your steri-strips at this visit. |

POSTOPERATIVE PAIN EXPECTATIONS

The aim of knee surgery is to decrease pain, improve motion, and result in a better quality of life. We do our best to minimize postoperative pain by prescribing the medications below, but it is important to note that some level of discomfort is to be expected the first few days following surgery.

Postoperative Medications and Instructions

- **Percocet 5/325 mg (oxycodone 5 mg/acetaminophen 325 mg) ***Optional**
 - Take 1 or 2 tabs every 4-6 hours as needed for postoperative pain.
 - Percocet is a narcotic pain medication and may cause **constipation**. If constipation occurs, you may use **Miralax or Colace** which can be purchased over the counter at your local pharmacy.
 - Percocet should not be taken in combination with prescribed sleep medication.
 - **It is not safe to use more than 4,000 milligrams of acetaminophen in one day** (24 hours).
 - *If you are regularly prescribed pain medication from another provider, you will need to call your pain medication prescriber for postoperative narcotic pain medications.*
- **Colace (docusate) 100 mg: ***Optional** – Take 1 tablet twice daily to prevent constipation caused by the Percocet.
- **Aspirin 81 mg; an NSAID (Non-steroidal Anti-inflammatory) ***Necessary**
 - Available over the counter
 - Take 1 tablet twice daily.
 - You should begin taking this medication the night of the surgery.
 - This medication primary purpose **is to decrease the possibility of blood clots**.
 - You are to take this medication for the first **30 days** post op.
 - If you have any difficulty using anti-inflammatory medications or aspirin or have a history of peptic ulcer disease, please let us know.
 - If you have a history of clotting disorders, please let us know
- **Ibuprofen 800 mg (Advil); an NSAID (Non-steroidal Anti-inflammatory) ***Optional**
 - Take 1 tab by mouth, with food, every 8 hours as needed for postoperative pain.
 - If you have renal impairment or take blood thinners other than aspirin, please discuss the use of Ibuprofen with your primary care physician prior to its use.
 - Other NSAIDs (examples: Aleve, Motrin, Meloxicam, etc.) should not be taken with Ibuprofen.

Alternate Ibuprofen and Percocet every 4 hours

- *Example: 8am- Ibuprofen, 12pm- Percocet, 4pm- Ibuprofen, 8pm- Percocet...*

- **Pepcid (famotidine) 20 mg: ***Necessary**
 - Take 1 tablet twice daily to protect your stomach while taking aspirin.
- **ICE**

Other Medications

Many patients find they may have less pain in the daytime hours following their operation, with continued pain at night. In these instances, pain medication (Percocet) may be used. If you have a history of sleep apnea or respiratory problems, you should discuss medications with your primary care provider prior to their use.

- **Miralax (polyethylene glycol 3350): ***Optional** – The bottle top is a measuring cap marked to contain 17 grams of powder, stir and dissolve in any 4 ounces of beverage then drink once a day to prevent constipation caused by the Percocet.
- **Zofran (ondansetron) 4 mg: ***Optional**
 - Take 1 tablet every 6 hours as needed for nausea/vomiting.
- **Flexeril (cyclobenzaprine) 10 mg:** Will be ordered by Dr. Robinson if needed for muscle spasm.
 - Take 1 tablet every 8 hours as needed for muscle spasms
 - Do not take more than 30 mg (3 tablets) in one day

Your pharmacist is a great resource for medication questions. You may also call our office with any questions.

Other Important Notes

- We recommend that for the first night and day following knee surgery, patients take the Percocet and Ibuprofen (if tolerated) around the clock. As pain improves you may stop the Percocet and take the Ibuprofen and Tylenol (acetaminophen) as needed. (You can take ibuprofen and Tylenol together)
- Your pharmacist is a great resource for medication questions. You may also call our office with any questions preoperatively.

After surgery, call the clinic if you have....

- A fever higher than 101° (38.3° C).
- Changes in your incision: opening, drainage, redness.
- Numbness or tingling or loss of function of your leg.
 - Numbness around the incisions is normal.
- Increased pain or swelling in your calf.
- Nausea or other side effect not controlled by the medications you are given.
- **CALL 911 IMMEDIATELY IF YOU HAVE CHEST PAIN OR SHORTNESS OF BREATH.**

POSTOPERATIVE INSTRUCTIONS

- **Weight bearing/Brace**

- You are weight bearing as tolerated after surgery; it is required that you use crutches/walker until you regain functional control of your leg (2-4 weeks).
- You will be provided a brace; range of motions will NOT be restricted
- If resting, place towel roll under heel to allow knee to **fully extend** – this may be uncomfortable in the back of your knee initially.

- **Movement & Home Exercise Plan (HEP)**

- It is beneficial to change positions often. Alternate sitting, reclining, and lying down approximately every 30 minutes. Feel free to move around at home as much as you can tolerate, as we do not want your knee to get stiff.
- **DO NOT STAY IN BED.** We recommend at least 10 minutes of walking every hour.
- The **day after surgery**, we encourage you to provide motion to the knee with the following methods.
 - **Straight leg raises:** 10-20 reps 3-5 times per day
 - **Ankle pumps:** with leg straight, pump foot up and down. 20-30 reps, three times per day.
 - **Gluteal sets:** tighten buttock muscles for 5-second hold. 20-30 reps, three times per day.

- **Sleep**

- Keep your brace on locked in extension during the first week
- Elevate your leg and place a towel roll under your heel to encourage your leg to straighten

- **Ice**

- Use bagged ice **as much as possible** when you get home at intervals of 30 minutes on and off. You should use ice for approximately two weeks. Do not use ice while you are sleeping.
 - Place the ice onto the knee over a thin layer of clothing or a towel, but never directly on the skin.

- **Wound care, Dressings/Bandages**

- Leave surgical bandage on until your follow up visit
- To shower, use a plastic bag over your extremity and dressing to keep it dry – do NOT get your dressings wet
 - Plan to bathe with leg outside of tub or sponge bath the first week
- Do not apply lotions or ointments to the incisions.
- Your stiches are absorbable under the skin – you will not need stiches removed after surgery.
- Do not soak incisions in any pool/spa/bath water until 3 weeks after postoperatively or until your incisions are completely closed.
- Do not allow pets to sit on your lap or sleep in your bed for at least 4 weeks following surgery. Pets may harbor fleas, mites, or other organisms that may cause infection.

TIMELINE AND INSTRUCTIONS

• BEFORE SURGERY

○ 5 days before surgery:

- Notify Dr. Robinson if there has been a change in your medical condition (cold, infection, fever, etc.). It may be necessary to reschedule your surgery.
- Arrange for a family member or friend to accompany you on the day of your surgery, and for someone to stay with you for the first night you return home.
- Please discontinue NSAID medications such as Ibuprofen and Aleve as well as those listed below:
 - Examples: Fish oil, Vitamins (i.e. E, C), supplements, St. John's Wort, Glucosamine, Chondroitin, etc.
- Discontinue blood thinners (Aspirin, Plavix, Coumadin, etc.).
- You may continue to take Celebrex, Tylenol, Tramadol, and pain killers (i.e. Norco/Vicodin) up until the day prior to surgery.
- Ensure pre-operative appointment with primary care physician (PCP) has been completed, if required.
- Do not shave surgical area.

○ 2 days before surgery:

- Cleanse the surgical site with Benzoyl Peroxide 10% Topical Cleanser/Wash: (sold over the counter). Use the solution over the operative knee and entire extremity for 3 consecutive mornings before surgery in the shower:
 - Start wash on preoperative day-2, followed by preoperative day-1 and again the morning of surgery. Apply the solution to the rinsed knee for 3 minutes before washing it away. This will decrease your risk of surgical infection. Do not use this solution after the surgery.
- Place ice packs in freezer.
- Purchase Shower Shield, plastic garbage bags (for showering).
- Ensure postop medications are picked up from pharmacy. See attached sheet for medication instructions.

○ 1 day before surgery:

- **Ensure you have a family or friend driving you home from surgery. Patients will not be discharged to an Uber, Lyft, Taxi**
- The hospital will call you 1 day before surgery with your arrival time and surgical time.
- Stay well hydrated. Drink plenty of fluids, including water, Gatorade, or juice.
- If you have a fever, cold, or upper respiratory infection please call and inform Dr. Robinson's team.

○ Day of surgery:

- **Stop all food and drink at midnight. It is okay to brush your teeth.**
- You may take your regular medications such as those for high blood pressure, thyroid, and seizures the morning of surgery.
- Wear loose fitting, easy to remove clothes to the surgical center.
- Keep your schedule open, surgical times are subject to change.

• AFTER SURGERY

○ Postop Day 1

- Ice the knee in 30-minute intervals.
- Start postop medications. Reference postop medication section for instructions.
- Use crutches.

- Start aspirin 81 mg, twice a day for 30 days following surgery.
 - Begin exercises in HEP.
 - Postop Day 2
 - Continue icing.
 - Do **NOT** remove dressings
 - **You may shower but surgical incisions MUST remain covered.**
 - Continue gentle range of motion exercises.
 - Postop Day 3+
 - Continue Icing
 - Continue medication regimen with pain meds as needed
 - Continue gentle range of motion exercises
-



Benzoyl Peroxide 10% Acne Medication Wash

Wash knee and extremity with benzoyl peroxide starting 2 days before surgery, 1 day before surgery and on the morning of surgery.

Apply the solution to the rinsed knee for 3 minutes before washing it away. This will decrease your risk of surgical infection.

Do not use this solution after the surgery.

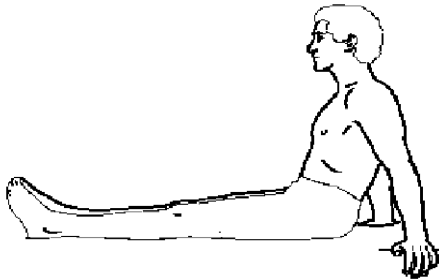
Pre-Op Shopping Checklist:

- Post-op Meds
- Cleansing solution
- Gel Packs
- Aspirin 81 mgs
- Miralax (for constipation if needed)
- Colace (docusate) 100 mg (stool softener if needed)
- Pepcid (famotidine) 20 mg (for acid indigestion if needed)

KNEE ARTHROPLASTY- POSTOPERATIVE EXERCISES

Dr. Sean Robinson, M.D.

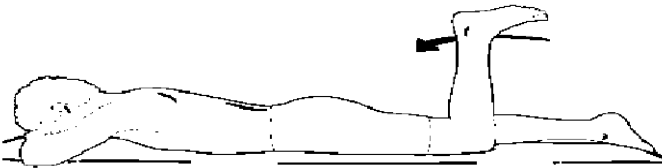
EXERCISES TO BEGIN THE DAY OF SURGERY



Strengthening: Quadriceps Set

Tighten muscles on top of thighs by pushing knees down into surface. Hold 10 seconds.

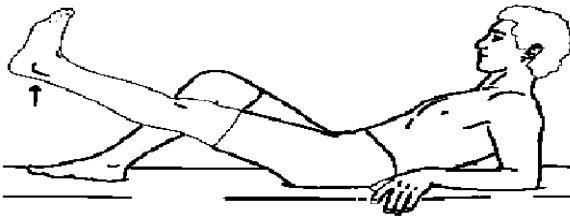
Repeat 3-5 times per set.
Do 1-2 sessions per day.



Self-Mobilization: Knee Flexion (Prone)

Bring your involved heel toward buttocks as close as possible.
Hold 20 seconds. Relax.

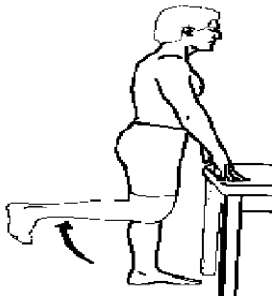
Repeat 5 times per set.
Do 1-2 sessions per day.



Strengthening: Straight Leg Raise

Resting on forearms, tighten muscles on front of your involved thigh, then lift leg from surface, keeping knee locked.
Hold for 3-5 seconds.

Repeat 3-5 times per set.
Do 1-2 sessions per day.



Strengthening: Knee Flexion (Standing)

With support, bend your involved knee as far as possible.
Hold for 3-5 seconds.

Repeat 3-5 times per set.
Do 1-2 sessions per day.